

RECEIVED

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FEB 13 2002

TECH CENTER 1600/2900



1600

1644

## RAW SEQUENCE LISTING

DATE: 02/04/2002

PATENT APPLICATION: US/09/491,146A

TIME: 13:37:23

Input Set : A:\W121280.txt

Output Set: N:\CRF3\02042002\I491146A.raw

ENTERED

3 <110> APPLICANT: The Government of the United States of America, as represented by  
4 the Secretary, Department of Health and Human Services,  
5 c/o Centers for Disease Control and Prevention  
6 Khudyakov, Yuriy  
7 Fields, Howard  
9 <120> TITLE OF INVENTION: MOSAIC PROTEIN AND RESTRICTION ENDONUCLEASE ASSISTED  
10 LIGATION METHOD FOR MAKING THE SAME  
12 <130> FILE REFERENCE: 14114.0344U2  
14 <140> CURRENT APPLICATION NUMBER: 09/491,146A  
C--> 15 <141> CURRENT FILING DATE: 2000-01-25  
17 <150> PRIOR APPLICATION NUMBER: 08/921,887  
W--> 18 <151> PRIOR FILING DATE: 25-08-97  
20 <160> NUMBER OF SEQ ID NOS: 55  
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
24 <210> SEQ ID NO: 1  
25 <211> LENGTH: 55  
26 <212> TYPE: DNA  
27 <213> ORGANISM: Hepatitis C virus  
W--> 28 <400> SEQUENCE: 1  
29 ccccgaaattc aaccgaaacc gcaacgtaaa accaaacgta acaccattcg tcgtc 55  
31 <210> SEQ ID NO: 2  
32 <211> LENGTH: 69  
33 <212> TYPE: DNA  
34 <213> ORGANISM: Hepatitis C virus  
W--> 35 <400> SEQUENCE: 2  
36 ccccgatcc tatttcggac caacgatctg accaccaccc ggaatttaa cgtcctgcgg 60  
37 acgacgaat 69  
39 <210> SEQ ID NO: 3  
40 <211> LENGTH: 54  
41 <212> TYPE: DNA  
42 <213> ORGANISM: Hepatitis C virus  
W--> 43 <400> SEQUENCE: 3  
44 ccccgaaattc aaccgaaacc gcaacgtcag accaaacgta acaccaaccg tcgt 54  
46 <210> SEQ ID NO: 4  
47 <211> LENGTH: 70  
48 <212> TYPE: DNA  
49 <213> ORGANISM: Hepatitis C virus  
51 <400> SEQUENCE: 4  
52 ccccgatcc tatttcggac caacgatctg accaccaccc ggaatttaa cgtcctgcgg 60  
53 acgacggttg 70  
55 <210> SEQ ID NO: 5  
56 <211> LENGTH: 51  
57 <212> TYPE: DNA

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58 <213> ORGANISM: Hepatitis C virus
W--> 59 <400> SEQUENCE: 5
60 ccccggaattc aaccgaaacc gcaacgtaaa accaaacgta acacctaccg t 51
62 <210> SEQ ID NO: 6
63 <211> LENGTH: 73
64 <212> TYPE: DNA
65 <213> ORGANISM: Hepatitis C virus
W--> 66 <400> SEQUENCE: 6
67 ccccggaattc tatttcggac caacgatctg accaccaccc gggaatttaa cgtcctgcgg 60
68 acgacggtag gtg 73
70 <210> SEQ ID NO: 7
71 <211> LENGTH: 55
72 <212> TYPE: DNA
73 <213> ORGANISM: Hepatitis C virus
W--> 74 <400> SEQUENCE: 7
75 ccccggaattc aaccgaaacc gcaacgtaaa ccgaaccgta acaccaaccg tcgtc 55
77 <210> SEQ ID NO: 8
78 <211> LENGTH: 69
79 <212> TYPE: DNA
80 <213> ORGANISM: Hepatitis C virus
W--> 81 <400> SEQUENCE: 8
82 ccccggaattc tatttcggac caacgatctg accaccaccc gggaatttaa cgtcctgcgg 60
83 acgacggtt 69
85 <210> SEQ ID NO: 9
86 <211> LENGTH: 63
87 <212> TYPE: DNA
88 <213> ORGANISM: Hepatitis C virus
W--> 89 <400> SEQUENCE: 9
90 ccccggaattc aaccgaaacc gcaacgtaaa ccgaaccgta acaccccgcg tcgtccgcag 60
91 gac 63
93 <210> SEQ ID NO: 10
94 <211> LENGTH: 60
95 <212> TYPE: DNA
96 <213> ORGANISM: Hepatitis C virus
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98 ccccggaattc tatttcggac caacgatctg accaccaccc gggaatttaa cgtcctgcgg 60
101 <210> SEQ ID NO: 11
102 <211> LENGTH: 55
103 <212> TYPE: DNA
104 <213> ORGANISM: Hepatitis C virus
W--> 105 <400> SEQUENCE: 11
106 ccccggaattc aaccgaaacc gcaacgtaaa accaaacgta acgctcaccg tcgtc 55
108 <210> SEQ ID NO: 12
109 <211> LENGTH: 69
110 <212> TYPE: DNA
111 <213> ORGANISM: Hepatitis C virus
W--> 112 <400> SEQUENCE: 12
113 ccccggaattc tatttcggac caacgatctg accaccaccc gggaatttaa cgtcctgcgg 60
114 acgacggtg 69

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116 <210> SEQ ID NO: 13
117 <211> LENGTH: 55
118 <212> TYPE: DNA
119 <213> ORGANISM: Hepatitis C virus
W--> 120 <400> SEQUENCE: 13
121 ccccgaaattc aaccgaaacc gcaacgtaaa aaccagcgta acaccaaccg tcgtc 55
123 <210> SEQ ID NO: 14
124 <211> LENGTH: 69
125 <212> TYPE: DNA
126 <213> ORGANISM: Hepatitis C virus
W--> 127 <400> SEQUENCE: 14
128 ccccgatcc tatttcggac caacgatctg accaccaccc gggaatttaa cgtcctgcgg 60
129 acgacggtt 69
131 <210> SEQ ID NO: 15
132 <211> LENGTH: 55
133 <212> TYPE: DNA
134 <213> ORGANISM: Hepatitis C virus
W--> 135 <400> SEQUENCE: 15
136 ccccgaaattc aaccgaaacc gcaacgtaaa accaaacgta acaccattcg tcgtc 55
138 <210> SEQ ID NO: 16
139 <211> LENGTH: 69
140 <212> TYPE: DNA
141 <213> ORGANISM: Hepatitis C virus
W--> 142 <400> SEQUENCE: 16
143 ccccgatcc tatttcggaa cgtagataac accaccaccc gggaatttaa cgtcctgcgg 60
144 acgacgaat 69
146 <210> SEQ ID NO: 17
147 <211> LENGTH: 56
148 <212> TYPE: DNA
149 <213> ORGANISM: Hepatitis C virus
151 <400> SEQUENCE: 17
152 ccccgaaattc aaccgaaacc gcaacgtaaa accgaacgta acaccaaccg tcgtcc 56
154 <210> SEQ ID NO: 18
155 <211> LENGTH: 65
156 <212> TYPE: DNA
157 <213> ORGANISM: Hepatitis C virus
W--> 158 <400> SEQUENCE: 18
159 ccccgatcc tatttcggac caacgatctg accaccacca gagaaacgaa cgtccggacg 60
160 acggt 65
162 <210> SEQ ID NO: 19
163 <211> LENGTH: 54
164 <212> TYPE: DNA
165 <213> ORGANISM: Hepatitis C virus
W--> 166 <400> SEQUENCE: 19
167 ccccgaaattc aaccgaaacc gaaacgtcag accaaacgta acaccctgcg tcgt 54
169 <210> SEQ ID NO: 20
170 <211> LENGTH: 73
171 <212> TYPE: DNA
172 <213> ORGANISM: Hepatitis C virus

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W--> 173 <400> SEQUENCE: 20
      174 ccccgatcc tatttcggac caacgatctg accaccagcc ggggaatttaa cgtttttcgg      60
      175 acgacgacgc agg                                         73
      177 <210> SEQ ID NO: 21
      178 <211> LENGTH: 55
      179 <212> TYPE: DNA
      180 <213> ORGANISM: Hepatitis C virus
W--> 181 <400> SEQUENCE: 21
      182 ccccgaaattc aaccgaaacc gcaacgtaaa accaaacgta aagctcaccg tcgtc      55
      184 <210> SEQ ID NO: 22
      185 <211> LENGTH: 69
      186 <212> TYPE: DNA
      187 <213> ORGANISM: Hepatitis C virus
W--> 188 <400> SEQUENCE: 22
      189 ccccgatcc tatttcggac caacgatctg accaccaccc ggggaatttaa cgtcctgcgg      60
      190 acgacggtg                                         69
      192 <210> SEQ ID NO: 23
      193 <211> LENGTH: 28
      194 <212> TYPE: PRT
      195 <213> ORGANISM: Hepatitis C virus
W--> 196 <400> SEQUENCE: 23
      197 Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Ile Arg Arg Pro Gln
      198   1             5             10             15
      199 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
      200           20             25
      201 <210> SEQ ID NO: 24
      202 <211> LENGTH: 28
      203 <212> TYPE: PRT
      204 <213> ORGANISM: Hepatitis C virus
W--> 205 <400> SEQUENCE: 24
      206 Pro Lys Pro Gln Arg Gln Thr Lys Arg Asn Thr Asn Arg Arg Pro Gln
      207   1             5             10             15
      208 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
      209           20             25
      211 <210> SEQ ID NO: 25
      212 <211> LENGTH: 28
      213 <212> TYPE: PRT
      214 <213> ORGANISM: Hepatitis C virus
W--> 215 <400> SEQUENCE: 25
      216 Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Tyr Arg Arg Pro Gln
      217   1             5             10             15
      218 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
      219           20             25
      220 <210> SEQ ID NO: 26
      221 <211> LENGTH: 28
      222 <212> TYPE: PRT
      223 <213> ORGANISM: Hepatitis C virus
W--> 224 <400> SEQUENCE: 26
      225 Pro Lys Pro Gln Arg Lys Pro Asn Arg Asn Thr Asn Arg Arg Pro Gln

```

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```

226 1          5          10          15
227 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
228          20          25
229 <210> SEQ ID NO: 27
230 <211> LENGTH: 28
231 <212> TYPE: PRT
232 <213> ORGANISM: Hepatitis C virus
W--> 233 <400> SEQUENCE: 27
234 Pro Lys Pro Gln Arg Gln Pro Lys Arg Asn Thr Pro Arg Arg Pro Gln
235 1          5          10          15
236 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
237          20          25
239 <210> SEQ ID NO: 28
240 <211> LENGTH: 28
241 <212> TYPE: PRT
242 <213> ORGANISM: Hepatitis C virus
W--> 243 <400> SEQUENCE: 28
244 Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Ala His Arg Arg Pro Gln
245 1          5          10          15
246 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
247          20          25
248 <210> SEQ ID NO: 29
249 <211> LENGTH: 28
250 <212> TYPE: PRT
251 <213> ORGANISM: Hepatitis C virus
W--> 252 <400> SEQUENCE: 29
253 Pro Lys Pro Gln Lys Arg Asn Gln Arg Asn Thr Asn Arg Arg Pro Gln
254 1          5          10          15
255 Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
256          20          25
257 <210> SEQ ID NO: 30
258 <211> LENGTH: 28
259 <212> TYPE: PRT
260 <213> ORGANISM: Hepatitis C virus
W--> 261 <400> SEQUENCE: 30
262 Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Ile Arg Arg Pro Gln
263 1          5          10          15
264 Asp Val Lys Phe Pro Gly Gly Gly Val Ile Tyr Val
265          20          25
266 <210> SEQ ID NO: 31
267 <211> LENGTH: 28
268 <212> TYPE: PRT
269 <213> ORGANISM: Hepatitis C virus
W--> 270 <400> SEQUENCE: 31
271 Pro Lys Pro Gln Arg Lys Thr Glu Arg Asn Thr Asn Arg Arg Pro Gln
272 1          5          10          15
273 Asp Val Arg Phe Ser Gly Gly Gly Gln Ile Val Gly
274          20          25
275 <210> SEQ ID NO: 32

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## VERIFICATION SUMMARY

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Input Set : A:\W121280.txt

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L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:18 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD  
L:28 M:283 W: Missing Blank Line separator, <400> field identifier  
L:35 M:283 W: Missing Blank Line separator, <400> field identifier  
L:43 M:283 W: Missing Blank Line separator, <400> field identifier  
L:59 M:283 W: Missing Blank Line separator, <400> field identifier  
L:66 M:283 W: Missing Blank Line separator, <400> field identifier  
L:74 M:283 W: Missing Blank Line separator, <400> field identifier  
L:81 M:283 W: Missing Blank Line separator, <400> field identifier  
L:89 M:283 W: Missing Blank Line separator, <400> field identifier  
L:97 M:283 W: Missing Blank Line separator, <400> field identifier  
L:105 M:283 W: Missing Blank Line separator, <400> field identifier  
L:112 M:283 W: Missing Blank Line separator, <400> field identifier  
L:120 M:283 W: Missing Blank Line separator, <400> field identifier  
L:127 M:283 W: Missing Blank Line separator, <400> field identifier  
L:135 M:283 W: Missing Blank Line separator, <400> field identifier  
L:142 M:283 W: Missing Blank Line separator, <400> field identifier  
L:158 M:283 W: Missing Blank Line separator, <400> field identifier  
L:166 M:283 W: Missing Blank Line separator, <400> field identifier  
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L:196 M:283 W: Missing Blank Line separator, <400> field identifier  
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L:215 M:283 W: Missing Blank Line separator, <400> field identifier  
L:224 M:283 W: Missing Blank Line separator, <400> field identifier  
L:233 M:283 W: Missing Blank Line separator, <400> field identifier  
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L:261 M:283 W: Missing Blank Line separator, <400> field identifier  
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L:306 M:283 W: Missing Blank Line separator, <400> field identifier  
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L:411 M:283 W: Missing Blank Line separator, <400> field identifier  
L:419 M:283 W: Missing Blank Line separator, <400> field identifier

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Input Set : A:\W121280.txt

Output Set: N:\CRF3\02042002\I491146A.raw

L:427 M:283 W: Missing Blank Line separator, <400> field identifier  
L:434 M:283 W: Missing Blank Line separator, <400> field identifier  
L:441 M:283 W: Missing Blank Line separator, <400> field identifier  
L:491 M:283 W: Missing Blank Line separator, <400> field identifier